

PATENT COOPERATION TREATY

PCT


INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 03 FEB 2005

WIPO PCT

Applicant's or agent's file reference 148236.3DAB		FOR FURTHER ACTION		See Form PCT/IPEA416
International application No. PCT/IL 03/00803		International filing date (day/month/year) 07.10.2003		Priority date (day/month/year) 07.10.2002
International Patent Classification (IPC) or national classification and IPC G11B17/00				
Applicant MEMPILE INC. ET AL.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 7 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (Indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains Indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 03.05.2004		Date of completion of this report 03.02.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Geoghegan, C Telephone No. +31 70 340-4295		



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/IL 03/00803

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-23 as originally filed

Claims, Numbers

1-48 received on 21.10.2004 with letter of 21.10.2004

Drawings, Sheets

1/3-3/3 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/IL 03/00803

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-48
	No: Claims	
Inventive step (IS)	Yes: Claims	1-48
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-48
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: US-B1-6 291 132 (LEVICH EUGENE BORIS ET AL) 18 September 2001 (2001-09-18)

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and shows (the references in parentheses applying to this document):

A method for use in recording/reading data from an array of data units within a three-dimensional storage medium, the method comprising:

- (a) providing exciting radiation in the form of first and second light beams of first and second different wavelengths, respectively (column 6, lines 13-24);
- (b) concurrently directing said first and second light beams and focusing them onto two sites in the medium at a predetermined distance between them, and collecting excited light of a third wavelength coming from the excited site in the medium to form a third excited light beam and direct it towards a detector assembly (column 12, line 67-column 13, lines 3) while correcting for spherical aberrations of the light focusing and collection;
- (c) sequentially repeating step (b) for successive sites in the medium with varying depth of focus (column 12, lines 46-48, and line 67-column 13 lines 6).

The subject-matter of claim 1 differs from D1 in that:

said focusing arrangement comprises two lens assemblies accommodated in an optical path of the exciting and excited light beams being arranged in a spaced-apart relationship along an optical axis of the focusing/collecting arrangement, one of said two lens assemblies being designed to perform the majority of light bending required for the focusing of the exciting light and collecting the excited light, and the other of said two lens assemblies being designed to compensate for changing spherical aberration introduced by a change in a thickness of the medium into which the exciting light is being focused.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/IL 03/00803

The problem to be solved by the present invention may be regarded as one of providing an alternative solution to correcting for spherical aberration. The spherical aberration of a particular optical setup is dependent on the nature of the material the light traverses and the length of the path through it. The present invention solves the problem of correction spherical aberration by the above differentiating features (two lenses assemblies).

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: none of the prior art proposes such a solution to fully compensate for spherical aberration.

The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent claim 31, for a system, which therefore is also considered to be new and inventive.

Claims 2-30 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step. Claims 32-48 are dependent on claim 31 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Notwithstanding the above reasoning, the attention of the Applicant is drawn to further objections. Dependent claims 18, 21, 22 and 32 do not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined due to the use of the term "desired".